

USING TECHNOLOGY TO STUDY CELLULAR AND MOLECULAR BIOLOGY

Nevada Science Academic Standards: Grades 9 – 12

Lesson	Standard	Objective
1, 2, 3	N.12.A.1	Students know tables, charts, illustrations and graphs can be used in making arguments and claims in oral and written presentations.
2, 3	N.12.A.3	Students know repeated experimentation allows for statistical analysis and unbiased conclusions.
3	N.12.A.4	Students know how to safely conduct an original scientific investigation using the appropriate tools and technology.
1, 2, 3	N.12.A.5	Students know models and modeling can be used to identify and predict cause-effect relationships.
1, 3, 4	N.12.B.1	Students know science, technology, and society influenced one another in both positive and negative ways.
All lessons	N.12.B.4	Students know scientific knowledge builds on previous information.
3	L.12.B.1	Students know cell structures and their functions.
3	L.12.B.2	Students know the human body has a specialized anatomy and physiology composed of an hierarchical arrangement of differentiated cells.
3	L.12.B.3	Students know disease disrupts the equilibrium that exists in a healthy organism.

Nevada Mathematics Academic Standards: Grades 9 – 12

Lesson	Standard	Objective
1, 2	A.1	Generalize solutions and apply previous knowledge to new problem solving situations.
2	A.2	Determine an efficient strategy, verify, interpret, and evaluate the results with respect to the original problem.
2	A.5	Identify necessary and extraneous information.
1, 2	A.7	Apply technology as a tool in problem solving situations.
1, 2	A.8	Apply combinations of proven strategies and previous knowledge to solve non-routine problems.
1, 2	B.2	Model and explain mathematical relationships using oral, written, graphic, and algebraic methods.
1, 2	B.5	Use everyday language, both orally and in writing, to communicate strategies and solutions to problems using appropriate mathematical language.
1, 2	D.4	Apply mathematical thinking and modeling to solve problems that arise in other disciplines, such as rhythm in music and motion in science.
1, 2	D.5	Identify, explain, and apply mathematics in everyday life.
1	1.12.6	Determine an approximate value of radical and exponential expressions using a variety of methods.
1, 2	1.12.8	Identify and apply real number properties to solve problems.

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1	3.12.3	Select and use appropriate measurement tools, techniques, and formulas to solve problems in mathematical and practical situations.
Nevada English Language Arts Academic Standards: Grade 12		
Lesson	Standard	Objective
All lessons	1.12.3	Apply knowledge of Anglo-Saxon-, Greek-, and Latin-derived roots and affixes to determine the meaning of unknown vocabulary across the curriculum.
2, 3, 4	2.12.1	Refine pre-reading strategies such as accessing prior knowledge, predicting, previewing, and setting a purpose to ensure comprehension.
2, 3, 4	4.12.3	Locate, organize, interpret, and synthesize information in multiple primary and secondary sources to support ideas and positions.
2, 3, 4	4.12.4	Critique the power, logic, reasonableness, and audience appeal of arguments advanced in texts.
1, 2, 3	4.12.6	Read and apply multi-step directions to perform complex procedures and tasks.
3, 4	5.12.2	Produce subject-specific technical writing, such as instructions for a shop project or field reports for science.
3, 4	5.12.5	Write summaries or abstracts that distill large amounts of information into clear, concise prose.
3, 4	6.12.3	Write compositions that present complex ideas in a sustained and compelling manner.
3, 4	7.12.1	Apply the rules of usage, grammar, and capitalization with few significant errors; use modifiers, parallel structure, and subordination correctly in writing.
3, 4	7.12.3	Use rules of punctuation; manipulate conventions for emphasis in writing.
3, 4	7.12.5	Demonstrate conventional spelling.
3, 4	8.12.1	Summarize and evaluate communications that inform, persuade, and entertain.
All lessons	9.12.1	Use specific and varied vocabulary and apply standard English to communicate ideas.
2, 3, 4	10.12.1	Participate in problem-solving conversations or group discussions by identifying, synthesizing, and evaluating data.
4	10.12.2	Negotiate to arrive at consensus by proposing and examining possible options.
4	10.12.4	Justify a position using logic and refuting opposing viewpoints.
3, 4	11.12.1	Formulate cross-curricular research questions and use an appropriate research design to gather information.
3, 4	11.12.5	Organize and present research findings using appropriate media.
Nevada Health Education Core Curriculum Standards: High School		
Lesson	Standard	Objective
1, 4	1.12.6	Analyze how research and medical advances influence the prevention and control of disease.
1, 4	4.12.2	Explore how technology is used to enhance health.